This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A method for gain control in a digital subscriber line system comprising an analog front end with a plurality of interleaved gain and filter stages, comprising the sequential acts of:

selecting an order for said gain stages to be considered;

initializing each of said plurality of gain stages to respective minimal gain setting, wherein each gain stage has a plurality of incremental gain settings; and

for a first iteration of each gain stage in said selected order:

increasing a corresponding gain setting by one increment;

determining a peak average of a plurality of data frames received by said analog front end for a present gain setting; and

if said peak average is greater than a peak target, reduce said gain setting by one increment and proceed to a next gain stage in said selected gain stage order;

otherwise increase said gain setting by one increment and return to said act of determining a current peak average, <u>wherein said selecting an order for said gain stages to be considered further comprises: determining a loop type in said subscribers line system; and selecting a gain stage order corresponding to said loop type</u>.

Claim 2 (Canceled).

Claim 3 (Original): The method of Claim 1 further including resetting a gain stage counter to begin with a first gain stage in said selected.

Claim 4 (Previously Presented): The method of Claim 1 further including waiting a time period for determining said peak average following a change in a gain setting.

Claim 5 (Previously Presented): The method of Claim 1, wherein said determining a peak average comprises:
 determining a maximum peak for said plurality of data frames; and
 applying a median operator to said determined maximum peak for providing said peak average.

Claim 6 (Previously Presented): The method of Claim 1 further including a second iteration of each gain stage in said selected order comprising the sequential acts of:
 increasing a maximum gain setting; and
 repeating said first iteration of each gain stage.

Claim 7 (Canceled).

Claim 8 (Original): The method of Claim 1 further including a plurality of subsequent iterations each comprising:
 increasing said maximum gain setting; and
 repeating said first iteration of each gain stage.

Claim 9 (Previously Presented): The method of Claim 6 further including waiting a time period for determining said peak average following a change in a gain setting.

Claim 10 (Previously Presented): The method of Claim 6, wherein said determining a peak average comprises:
 determining a maximum peak for said plurality of data frames; and
 applying a median to said determined maximum peak for providing said peak average.

Claim 11 (Currently Amended): A method for selecting a gain distribution for a plurality of interleaved programmable gain amplifiers of an analog front end in a digital subscriber line system, comprising:

selecting a sequential order for which programmable gain amplifiers settings are determined;

initiating each of said programmable gain amplifier settings to a lowest setting, wherein each said programmable gain amplifier has a plurality of incremental gain settings which includes a maximum setting; and

for a first iteration beginning with a first of said selected sequential order and repeating for each programmable gain amplifier:

selecting a highest incremental gain setting which provides a nonsaturated signal condition, wherein said signal condition is determined by a peak average for a plurality of data frames received by said analog front end,

wherein said selecting a sequential order further comprises: determining a loop type in said digital subscriber line system; and selecting a predetermined sequential order corresponding to said loop type.

Claims 12 – 13 (Canceled).

Claim 14 (Original): The method of Claim 11 further including a second iteration beginning with a first of said selected sequential order and repeating for each programmable amplifier:

increasing said maximum setting by at least one incremental setting; and

selecting a highest incremental gain setting which provides a nonsaturated signal condition.

Claim 15 (Canceled).

Claim 16 (Original): The method of Claim 14, wherein said selecting a sequential order further comprises:

determining a loop type in said digital subscriber line system; and

selecting a predetermined sequential order corresponding to said loop type.

Claim 17 (Original): The method of Claim 11 further including a plurality of subsequent iterations each comprising:

increasing said maximum setting by at least one incremental setting; and

repeating said first iteration.

Claim 18 (Currently Amended): An apparatus for selecting a gain distribution in a subscriber line system, comprising:

an analog front end having a plurality of serially coupled gain stages and adapted to receive a data signal;

an analog-to-digital converter adapted to receive a data signal from said analog front end; and

a processor coupled to said analog-to-digital converter and adapted to <u>determine a loop type in said subscribers line system and</u> select a gain setting of each of said gain stages in a predetermined order <u>corresponding to said loop type</u>, said processor further adapted to execute instructions for selecting a highest incremental gain setting which provides a nonsaturated signal condition based on a peak average for a plurality of data frames received by said analog front end.

Claim 19 (Original): The apparatus of Claim 18, wherein said gain stages comprise programmable gain amplifiers.

Claim 20 (Original): The apparatus of Claim 18, wherein said processor comprises a digital signal processor.